

Interview Summary	Application No. 09/492,242	Applicant(s) KALMAN, ANDREW E.	
	Examiner Kenneth Tang	Art Unit 2127	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Kenneth Tang. (3) _____
 (2) Mr. Donald R. Boys. (4) _____

Date of Interview: 30 August 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____.

Claim(s) discussed: 1, 4, 11, and 14.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant agreed to amend the claims as illustrated in the attached printed email.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

 Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Tang, Kenneth

Requested by Examiner
8/30/04

From: Donald R. Boys [rexboys@centralcoastpatent.com]

Sent: Monday, August 30, 2004 4:26 PM

To: Tang, Kenneth

Cc: Andrew E Kalman; Mark Boys

Subject: Case 4300 09492242

KT

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Dear Examiner Tang,

Here is a marked-up claim set for the language I believe should suffice for the allowability we discussed:

1. (Currently amended) A real-time operating system (RTOS) comprising:
 - a kernel for managing task execution, including context switching; ~~and~~
 - a plurality of defined tasks as code sets, individual ones of the tasks having subroutines callable in nested levels for accomplishing tasks; and
 - a wait-on-event function;
 - ~~characterized in that wherein~~ the kernel constrains context switching to occur only at task level, rather than allowing context switches at lower sub-routine level and wherein the wait-on-event function is called only at task-level, returns a value based on whether an event is available or not, and initiates a context switch or not based on the returned value.
2. (Original) The RTOS of claim 1 wherein the RTOS operates with a single call-return stack common to all of the defined tasks.
3. (Original) The RTOS of claim 2 wherein the single stack is implemented as a general-purpose stack.
4. (Currently amended) The RTOS of claim 2 wherein the single stack is implemented ~~as a hardware call-return stack~~ as hardware.

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8/30/04

5. (Original) The RTOS of claim 2 comprising a specific task control block assigned to each task, wherein a single task-resume address is saved.
6. (Original) The RTOS of claim 5 wherein additional task-specific information is saved.
7. (Original) The RTOS of claim 5 wherein a task-resume address is obtained in a context switch by placing a label at the point where the task is to resume, and obtaining the address of the label and storing that address as the task-resume address.
8. (Original) The RTOS of claim 7 wherein multiple labels are used within a single task to accomplish multiple context switches.
9. Canceled
10. (Currently amended) The RTOS of claim 1 ~~further comprising a~~ wherein the wait-on-event function is enclosed within a (while) loop at task level, and ~~characterized in that~~ wherein the task calls the wait-on-event function in the loop and examines its return code, exiting the loop if the event is available and initiates a context switch if not, and in the event of a context switch, the task recalls the wait-on-event function after resumption, being still in the loop, and repeats this procedure until exiting the loop.
11. (Currently amended) A method for operating a ~~minimal-memory~~ controller comprising steps of:
 - (a) executing by the controller a real-time operating system (RTOS) based on kernel-controlled multitasking;
 - (b) calling defined tasks by the kernel, with individual ones of the tasks calling component subroutines; ~~and~~
 - (c) constraining context-switching to occur solely at the task level rather than at any lower sub-routine level; and
 - (d) controlling context switching through a wait-on-event function wherein the function is called only at task-level, returns a value based on whether an event is available or not, and initiates a context switch or not based on the returned value.
12. (Original) The method of claim 11 wherein the RTOS operates with a single call-return stack common to all of the defined tasks.
13. (Original) The method of claim 12 wherein the single stack is implemented as a general-purpose stack.

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14. (Currently amended) The method of claim 12 wherein the single stack is implemented ~~as a hardware call...return stack~~ in hardware.

15. (Original) The method of claim 12 comprising a specific task control block assigned to each task, wherein a single task-resume address is saved.

16. (Original) The method of claim 15 wherein additional task-specific information is saved.

17. (Original) The method of claim 15 wherein a task-resume address is obtained in a context switch by placing a label at the point where the task is to resume, and obtaining the address of the label and storing that address as the task-resume address.

18. (Original) The method of claim 17 wherein multiple labels are used within a single task to accomplish multiple context switches.

19. Canceled

20. (Currently amended) The method of claim 11 ~~further comprising a~~ wherein the wait-on-event function is enclosed within a (while) loop at task level, and ~~characterized in that wherein~~ the task calls the wait-on-event function in the loop and examines its return code, exiting the loop if the event is available and initiates a context switch if not, and in the event of a context switch, the task recalls the wait-on-event function after resumption, being still in the loop, and repeats this procedure until exiting the loop.

Best, Don Boys, 35,074

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